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A SHORT STUDY OF THE COMMON AND STATUTORY WATER LAW OF MARYLAND AND VIRGINIA

FEDERAL WATER POLLUTION CONTROL ADMINISTRATION
CHARLOTTESVILLE, VIRGINIA

28 AUGUST 1969

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A SHORT STUDY

OF THE

COMMON AND STATUTORY WATER LAW

OF MARYLAND AND VIRGINIA

Working Document No. 32
Planning and Evaluation Office
FWPCA
Middle Atlantic Region
Charlottesville, Virginia
August 28, 1969

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SPRINGFIELD, VA. 22161

BIBLIOGRAPHIC DATA SHEET	1. Report No.	2.	3. Recipient's Accession No. PB-260 264
4. Title and Subtitle A Short Study of the Common and Statutory Water Law of Maryland and Virginia			5. Report Date 28 Aug 69 6.
7. Author(s)			8. Performing Organization Rept. No. Working doc.-32
9. Performing Organization Name and Address Federal Water Pollution Control Administration, Charlottesville, Va. Middle Atlantic Region.			10. Project/Task/Work Unit No. 11. Contract/Grant No.
12. Sponsoring Organization Name and Address			13. Type of Report & Period Covered 14.

15. Supplementary Notes

16. Abstracts

This document presents common and statutory water laws for Maryland and Virginia and legal concepts of water law in the U. S., including water courses, surface or diffused waters, and subsurface waters. Determination of water rights is increasingly affected by Federal and State legislative enactments. Statutory laws enacted by Congress have empowered the Federal Government to carry out water conservation, pollution abatement, and flood control projects under commerce, national defense, and welfare powers granted by the Constitution. Constantly changing environmental and technological circumstances, too rapid for common law development, have resulted in the growth of statutory water law.

17. Key Words and Document Analysis. 17a. Descriptors

17b. Identifiers/Open-Ended Terms

Maryland
Virginia
Laws
*Water law
*Water rights
Legislation
Water conservation
Water supply

17c. COSATI Field/Group 13B

18. Availability Statement	19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 65
	20. Security Class (This Page) UNCLASSIFIED	22. Price $4.50-300

A SHORT STUDY

OF THE

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OF MARYLAND AND VIRGINIA

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August 28, 1969

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INTRODUCTION

There are three basic legal concepts underlying the system of water law in force in the United States: res communes, riparianism, and appropriation.[1] Res communes is the old Roman law concept from which present day law has developed. Riparianism is the doctrine prevalent in the Eastern states, under which water is treated as a commodity to be shared by all property owners along a body of water. Prior appropriation is the doctrine prevailing in the Western states; under this doctrine, water rights are established according to the first use in point of time.

Res communes, based on Roman law, treats water as a natural resource belonging to the community; it is incapable of becoming private property. While this concept is not the prevailing water law doctrine in the United States at this time, it influences the law in two ways: first, under both riparianism and prior appropriation, water rights are looked on not as ownership of the water, but as ownership of the right to flow and use.[2] Second, while water is

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[1] See, M. Heath, Contemporary Eastern Water Rights Regulation, 3-8, (1966); J. Sax, Water Law, Cases and Commentary, 7-10 (Prelim. ed. 1965)

[2] To the extent that the right to use property is the most valuable aspect of ownership, this is a distinction without a difference. This is more apparent under the appropriation system where ownership of water rights is defined in terms of the right to use a definite quantity of water. But the basic concept of public ownership prevents arbitrary use (which is otherwise permitted under a strict,common law concept of complete ownership of property); forms a basis for the limited preeminent rights of the federal government; and affords a strong basis for future development of federal and state law toward strict and comprehensive regulation of water resources.

treated as subject to the laws of the individual states, the Federal Government exercises certain preeminent rights over water, based on a concept of public ownership of water. The Federal Government has what is called "a paramount navigational servitude"[3] so that private rights in waters acquired under state law remain subject to restriction or abolition in order to protect the public right of navigation.[4] And if the Federal Government, in exercising its dominant powers over navigation, destroys a private water right derived from the ownership of property bordering on waters (riparian property), the government is obliged to compensate the owner of that riparian property for the destruction of this water right.[5] The Federal Government also has

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[3] United States v. Rands, 389 U.S. 121 (1967).

[4] This is grounded on the doctrine that supreme power over commerce is vested in the United States government under the Commerce clause of the Constitution, and commerce includes navigation. Hence, it has been held that it is a valid exercise of constitutional power for the Federal Government to go into the business of generating and selling electricity when this was done under a Congressional enactment whose purpose was to set up a munitions plant for wartime use and to construct a dam to supply hydroelectric power to the plant and to generally improve navigation in the affected river. Since title to the electricity is vested in the United States, it has the power to sell any excess electricity to other consumers. This enactment is valid under both the Commerce clause of the Constitution and the national defense power. Ashwander v. Tennessee Valley Authority, 297 U.S. 288 (1936).

[5] United States v. Virginia Electric & Power Co., 365 U.S. 624 (1961); United States v. Twin City Power Co., 350 U.S. 22 (1956) (if the Federal Government, acting under its powers over navigation, condemns riparian land which is a promising site for hydroelectric power, it is obliged to compensate the owner only for the value of the land generally and not including its special value owing to its riparian location); United States v. Commodore Park, Inc., 324 U.S. 386 (1945) (if the Federal Government, in improving navigation, blocks the access to navigable waters of riparian land used for a marina, the owner can get no compensation).

exercised the power to declare the legal rights in lands it owns and grants to private individuals, despite the law of the state at the time of the grant or later.[6] Statutory laws enacted by Congress have empowered the Federal Government to carry out water conservation, pollution abatement, and flood control projects under the commerce, national defense, and welfare powers granted by the Constitution.[6a] The extent of the federal power is shown by the holding that, in certain circumstances, Congress can apportion water rights without regard to state law.[6b]

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[6] Hughes v. Washington, 389 U.S. 290 (1967); United States v. Oregon, 295 U.S. 1 (1935).

[6a] Water Conservation Acts, 16 U.S.C. §§590y to z-11 (1964); Water Pollution Control Act, 33 U.S.C. §§466-466n (1964), as amended, (Supp. IV, 1969); Flood Control Acts, 33 U.S.C. §§701-701n (1964); Desert Land Act, 43 U.S.C. §§321-323, 327-329 (1964); Water Supply Act, 43 U.S.C. §390b (1964); Boulder Canyon Project Act, 43 U.S.C. §§617-617t (1964).

[6b] Arizona v. California, 373 U.S. 546 (1963). This case upheld the Boulder Canyon Project Act, supra, which apportioned water rights in the Colorado River in contravention to the doctrine of prior appropriation prevailing in the Colorado basin states. This was justified because the apportionment was carried out as part of the Boulder Canyon Project, which is a comprehensive scheme to develop the basin area; it was held that the project involved physical difficulties too great for any one state to meet and that comprehensive use of the Colorado, an international navigable river, was vital to the development of that interstate area.

The doctrine of prior appropriation is generally in effect in the Western states.[7] This doctrine was developed, under conditions of scarcity that obtained when this area was first settled, by settlers who had little sophistication in the law but who responded to the situation by the ad hoc solution of giving priority to the first user (the traditional response was to give title to mining land to the first to stake his claim; since mining rights were of little value without water to operate the sluicing method of extraction, the same theory applied to water rights. When agriculture eventually replaced mining as the dominant industry in the West, the doctrine of prior appropriation continued to be necessary if the vast bulk of the land, which was non-riparian, was to be usable for agriculture). Appropriation is based solely on first beneficial use; as long as he who uses the water uses it without waste,[7a] he is entitled to as much water as he has traditionally taken with priority over the rights of all later users. If a particular water source is used by several, then in times of short supply, the last appropriator drops off in his use, and so on. Appropriation does not depend on ownership of land along the water source, and the use of the water is not restricted to the lands bordering the water source. But appropriation does depend on use so that a continuing failure to use a vested right

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[7] M. Heath, supra note 1, at 6-8; J. Sax, supra note 1, at 10.

[7a] For a discussion of the extensive doctrine bound up in the term "waste," see J. Sax, supra note 1, at 124-35.

to appropriate a certain quantity of water will result in the loss of that right.[7b]

Water rights in the Eastern states are established according to the doctrine of riparianism.[8] This doctrine developed under conditions of relative plenty, and rests on the proposition that rights in water arise from ownership of land which adjoins or underlies a stream--riparian land. Because water rights are incident to ownership of riparian land, they cannot be lost by disuse; but the water can only be used on that particular tract of land, and then only in the watershed of the stream from which the water is taken. As between riparian owners, allocation is not made according to who was the first user, but according to the basic common law theory of natural flow--no riparian may impair or diminish the flow of a stream, or pollute that stream, to the detriment of any other riparian, but all riparian owners are entitled to have the stream flow past their land just as it would in the state of nature. Since this theory would be unworkable in practice, that is, it is practicably impossible, especially for heavy industry, to use the water from a stream without diminishing its flow somewhat or impairing its quality, this

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[7b] Id. at 10.

[8] M. Heath, supra note 1, at 4-6; J. Sax, supra note 1, at 4-10. It is interesting to note that the 19th century development of water law in the United States was not greatly influenced by English common law because the English common law was only then beginning to develop water law. This late development may have been caused by the moist climate in England; water resources did not become scarce until relatively late in her history.

absolute doctrine has been universally modified in practice according to reasonable use. Under this development, a riparian owner is entitled to make a reasonable use of the water, taking into consideration the needs and uses of other riparians. What is considered to be a reasonable use depends on the situation governing each case. The only general rules are that domestic use takes first priority, then agricultural, industrial, or municipal uses. Courts often give preference to established uses over proposed new uses.

This discussion has so far treated, in a general way, the law as applied to water running in watercourses--lakes, rivers, and streams. But the law recognizes water as existing in distinct categories, the principal ones being watercourses, surface or diffused waters, and subsurface waters. Surface water is generally defined as water of a casual nature, not flowing in a defined channel, and usually incident to boggy land or resulting from rain and snow. Subsurface waters are defined either as percolating (not flowing in a well-defined channel) or as subterranean stream water.[9] Water law, as presently developed, devotes most of its attention to watercourses because it is with regard to this category of water that scarcity, and hence disputes, have first arisen.

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[9] It is presumed that all underground water is percolating, unless conclusive evidence shows that it is flowing in a well-defined channel. In fact, there are few cases in which courts have ruled that underground waters are other than percolating, whatever the scientific evidence. J. Sax, supra note 1, at 242. Hence, underground waters come under, almost exclusively, the doctrine covering percolating waters.

The law applied to surface and subsurface waters does not necessarily follow the doctrine of the watercourse law, whether riparian or prior appropriation, followed in a given jurisdiction. But as water resources in general become more scarce, this anomaly is being more recognized as an area of the law needing change.[10]

Surface waters are subject to one or the other of two doctrines, the common enemy rule and the civil law rule; the common enemy rule is followed by a slight majority of jurisdictions in both the Eastern and the Western states.[11] Under the common enemy rule, an owner is permitted to fight off unwanted surface water, even though this causes damage to a neighbor. This right is qualified to the extent that he is not permitted to damage his neighbor with a malicious intent, and he is not permitted to damage his neighbor by concentrating the fought-off surface water in an unnatural quantity. The civil law rule recognizes a natural easement in all land, so that each owner must not interfere with the natural flow of surface waters so as to cause an invasion of another's interests in the use and enjoyment of his land. A lower owner is not privileged to obstruct the natural flow of surface water from higher land, nor is a higher owner privileged to increase the natural flow of surface water upon lower land. The civil law rule is tempered by permitting an

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10 See, e.g., Dolson, Diffused Surface Water and Riparian Rights: Legal Doctrines in Conflict, 1966 Wis. L. Rev. 58.

11 Kinyon and McClure, Interferences with Surface Waters, 24 Minn. L. Rev. 891, 893, 902 (1940).

owner to make minor changes, without liability, in the natural flow of surface water as necessary to the normal use and improvement of his land.

These surface water doctrines are concerned only with the fending off of surface water; the law, in its present state of development, has not been concerned with the use of surface waters because, until recently, water resources have been abundant enough (or, as in the case of arid regions, surface waters are so extremely insignificant in comparison with watercourse and groundwater resources) that few disputes have arisen. There is a trend in most jurisdictions today to handle surface water problems by statute, usually by subjecting the impoundment of surface waters above a certain minimum amount to licensing requirements.

The development of the law of underground waters has followed much the same pattern as for surface waters. The earliest doctrine was that of absolute ownership, which permitted the owner of overlying land to use as much subsurface water as he wished, for whatever reasons, and with however much waste of the water and damage to neighbors as may occur.[12] This doctrine has been repudiated in most American jurisdictions, and there is considerable doubt that any court would uphold this doctrine today.[13] The doctrine of reasonable

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12 Acton v. Blundell, 152 Eng. Rep. 1223 (Ex. 1843).

13 J. Sax, supra note 1, at 251.

use predominates in the Eastern states.[14] Under this, an overlying owner is limited to using the subsurface water for beneficial purposes having a reasonable relationship to the use of his land; but he cannot use the water on non-overlying lands. If water is used beneficially, the landowner is not liable for interference with his neighbor's supply. Most of the Western states have enacted statutory schemes which regulate use of subsurface waters in the same way that rights in watercourses are regulated by prior appropriation.[14]

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14 Maloney and Plager, Florida's Ground Water: Legal Problems in Managing a Precious Resource, 21 U. Miami L. Rev. 751, 768-9 (1967).

15 Hutchins, Trends in the Statutory Law of Ground Water in the Western States, 34 Texas L. Rev. 157 (1955).

SUMMARY

Maryland Law

Like Virginia, Maryland follows riparian doctrine, deciding disputes on an ad hoc basis according to reasonable use. The domestic user is favored, and water cannot be used off of riparian land. The beds of navigable streams belong to the state and cannot be granted to a private owner. By statute, Public Watershed Associations may be established by localities for flood prevention and utilization and disposal of water in watershed areas. Water and Sewer Authorities may be set up by municipalities by ordinance; they may require connection by all property owners who do not have approved facilities of their own. Counties may set up sanitary districts by ordinance to provide water and sewer services. These districts must provide service to all owners, and all owners must connect to the services. The State Board of Health has powers over state waters from the standpoint of public health and can dictate the operation of sewage treatment plants if a threat to the public health is posed. The Department of Water Resources is given statutory authority to establish water quality standards, to order cessation of any pollution it deems excessive, and to control all dams and waterway obstructions over a certain size.

Under the common law of Maryland, the natural drainage doctrine is applied to surface waters; property owners are permitted to reasonably develop their property without liability to neighbors for surface water damage caused thereby. Property owners are

permitted under the common law to collect surface waters as long as a beneficial use is made and the collection is not made to maliciously damage a neighbor. Drainage associations may be established by petition to county government for the purpose of draining wet, swampy, or overflowed lands or lands subject to overflow. It is unlawful by statute to appropriate surface water without a permit from the Department of Water Resources, unless the water is used for domestic or farming purposes, for an approved municipal water supply, or for a use made before 1 January 1934.

The Maryland common law follows a special reasonable use doctrine for subsurface waters that decides rights in the same way as for watercourses; reasonable use must be made in a manner not inconsistent with other users. By statute, underground waters cannot be appropriated without permit, with the same exceptions made as for surface water appropriation.

SUMMARY

Virginia Law

When dealing with watercourses, Virginia common law follows riparian doctrine; water rights are decided according to reasonable use. There are no set rules by which disputes between riparian owners are settled; rather, the determination is a jury question to be decided according to the particular circumstances of the case. Domestic uses are favored over industrial and municipal uses. Water cannot be used off of riparian land or out of the watershed if this damages other riparian owners. Under Virginia common law, title to beds of navigable streams, tidal and non-tidal, is vested in the state. By statute, localities may establish sanitary districts by referendum for the operation of water supply and sewage systems, with connection required for all property owners. Dams for hydroelectric power are licensed, by statute, by the State Corporation Commission, with a legislative policy of eliminating competition and waste. By statute, mill dams are constructed with court permission. A strongly worded Water Control Law requires a permit from the State Water Control Board in order to discharge pollution into state waters.

Virginia common law follows the common enemy rule for surface waters, with a reasonable use limitation so that a property owner cannot maliciously damage his neighbor in fighting off surface water and cannot concentrate fended-off waters in an unnatural quantity at a particular point on neighboring land. By statute, soil and water conservation districts can be set up by referendum for the purpose

of soil conservation and prevention of erosion and floodwater damage. Landowners are given a statutory right to impound surface waters and, under court authority, can impound flood waters with permission of the State Water Control Board, so long as the average stream flow is not diminished.

In the absence of malice or negligence, a property owner, under the common law, can use subsurface waters as he wishes. By statute, abandoned flowing artesian wells must be capped to prevent waste.

CONCLUSIONS

In both Maryland and Virginia, the determination of water rights is becoming increasingly affected by legislative enactments. Until this century, water law was primarily a development of the common law, built up over a long period of time through judicial decisions settling disputes between rival claimants for a water right.

Both Congress and state legislatures have become more active in enacting legislation concerning water law; these enactments have sometimes reinforced common law doctrines, but have more often changed them. The growth of statutory water law is a result of two factors: the first is the increased role that legislatures, with the approval of the courts, have exercised in all areas of the law; the second is the impact of rapidly changing environmental and technological circumstances--the abundance of water and the uses to which it is put are changing too rapidly for the deliberate pace of common law development to permit effective response. But disputes over water must still be settled in court; if the dispute involves a matter covered by the common law, it will be settled by the common law; if the dispute involves a matter covered by statutory law, there is usually enough inevitable play in the statute that judicial interpretation will be required; and such interpretation will be made against the general background of the common law.

This does not mean, of course, that the common law of water rights is hopelessly "frozen" into a viewpoint relevant only to the 1840's. The salient trend in the common law, abetted by the pressure

from the legislatures, is an increasing reluctance by the courts to recognize private ownership of any water resource, and an increasing willingness by the courts to permit the state government, in representing the interests of the people, to exercise increased control over water resources. The judicial decisions from Virginia and Maryland show that the courts readily modify common law doctrines if a more effective societal use of water resources will result, as opposed to individual use. This is perhaps an inevitable result of the increased scarcity of water resources and the increased role that government is exercising over all aspects of a citizen's life.

Maryland and Virginia, like all Eastern states, are now facing, for the first time, scarcity in their water resources; this scarcity upsets the basic premise upon which water law doctrines have developed.

The present water law, a mixture of common and statutory law, has several significant weaknesses which hinder its ability to effectively cope with this great change in circumstance. These weaknesses concern both the substantive content and the procedural application of water law.

The substantive content of the common law is weak because it pigeonholes water into artificial categories based on its physical manifestation; it does not recognize the hydrologic cycle and the basic fact that all water resources are in a constant state of flux among the different phases of this cycle. Hence, different rights attach to water based on the accident of its phase in the cycle, and the exercise of these rights can have considerable effect on the

balance of water resources among these phases. For instance, in both Maryland and Virginia, a small farmer has a right to collect and use an unlimited amount of diffused surface water on his land. But if every landowner in a particular watershed did this to the maximum extent possible, radical change would result in the stream flow, water table, and weather in that watershed. Similarly, there is no legal limit in either of these jurisdictions on the amount of groundwater a landowner may extract; if every landowner used as much as he could extract from his own land, the effect on the water table, on drainage, and on stream flow would be considerable.

Under traditional riparian doctrine, water resources are shared, since every jurisdiction which has adopted the riparian doctrine has eventually developed a theory of reasonable use in its application. But because water resources are shared, no owner can ever be sure how much water he can depend on. There is no way that the flow in a heavily used stream can be regulated, since riparian owners have the right to use as much as they wish down to some minimum. Conversely, in a little-used stream, the excess is wasted, since that water cannot be used out of the watershed or on non-riparian land in that watershed.

The effect of the tendency of the common law to pigeonhole water rights and to insist on reasonable use is to narrow the focus of specific common law doctrines. What this does is to prevent the water law from taking an overall view; because the law looks at water within the specific terms of its basin and its phase in the hydrologic cycle, it does not have a broad enough ambit when applied to specific

problems. For instance, water cannot be used under the common law outside of the watershed of a stream; yet, interbasin transfer is being looked upon as one of the most promising solutions to water scarcity problems.

The substantive content of statutory water law, as well as the common law, is weak because although legislatures have the power to change the common law as necessary, existing statutes cover only a few of the problems, and the problems are usually covered in a manner quite different from the common law. Hence, disputes are settled differently, depending on whether the legislature has spoken on the problem or not.

Water rights are applied in a procedurally inadequate manner. First, as the effects of water scarcity have an increasingly pervasive impact on society, the adjustments that must be made have become increasingly oriented toward regulation of use between persons who have competing legal rights to use scarce water and away from the settlement of disputes under which the infringement of legal rights is claimed. Second, because a court is limited, both by necessary rules of evidence and an inevitable lack of expertise, in its inquiry to the dispute at hand, it is not always able to solve the problems presented to it based on a complete consideration of all aspects of water resource management; what is a good solution based on the particular facts of a case is often not a good solution based on a consideration of all aspects of water resources. This problem is magnified by the previously noted tendency of the substance of the common law to also narrow the focus

of inquiry. A final procedural problem is the fact that, especially in the area covered by statute, the law is often politically enunciated and politically enforced. The substance of the statute is enacted in response to political pressures, enforcement is placed in the hands of executive branch officials whose main concern is the political impact of their actions, and it is all too infrequent that political desires coincide with technologically and socially effective solutions. And since the typical water right dispute arising under a statute concerns the regulation, by the state, of the activities of a private person, it is the executive branch that has the initiative in deciding, first, whether there is going to be a dispute in practice, and second, how that dispute is going to be solved. Courts cannot settle disputes unless the problem is brought before them; they cannot initiate proceedings. This procedure, placed in the hands of government officials whose most delicate natural response is to political considerations, tends to shunt technological and sociological considerations into the background--the industry with the most political clout is going to get the pollution permit.

This discussion is premised on the proposition that the riparian/reasonable use approach is too fragmented and too slow in development to be able to meet present-day problems whose gravity is accelerating. Even if it were possible, it would solve little to adopt the Western states' prior appropriation doctrine. This

dosctine has its own weaknesses, different in kind but not in gravity.[16]

Water right problems seem to be most suited to a statutory, as opposed to a common law, solution. But there are infinite forms that a statutory program can take, and consideration must be given to the peculiar problems involved with taking this approach. The first problem is that if the legislature intends to pass a comprehensive program to be enforced by the executive through court action, it will have to pass a program that is infinitely detailed and thorough--courts are very jealous about the concept of separation of powers; they attach strong conditions if they are going to permit the delegating of legislative powers by the legislature to the executive branch of the government. But with detail comes rigidity--the executive branch will not have the power to operate flexibly, and the fact that legislatures in Maryland and Virginia do not meet continuously means that whenever the need for change arises, it will often entail a considerable wait before the legislature meets and can even begin to consider the change.

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[16] Since, by historical circumstance, most senior appropriators are downstream, huge evaporation losses occur before their water gets to them; waste is encouraged because appropriators would lose part of their rights from nonuse as they become more efficient; and specific quantities of water are frozen to certain tracts, regardless of whether this is the best use for them. Plager and Maloney, Emerging Patterns for Regulation of Consumptive Use of Water in the Eastern United States, 43 Ind. L.J. 383 (1968).

The type of problem involved with water rights is the problem of allocation of a scarce resource. This problem has been tackled before, for example, in the case of airwaves for electronic communication and airways for aviation. The solution has been the creation of the independent regulatory agency. By independent is meant that the agency is most commonly composed of a board consisting of members with broad expertise in the field to be regulated; the members are appointed by the executive branch with confirmation by the legislature. Since their terms are set so that their appointments do not coincide with the terms of office of their appointors, and, most importantly, so that their terms are long enough that they need fear removal only for incompetence or bad conduct, they are more able to insulate themselves from political pressure. By regulatory is meant that the agency has the power to set and enforce detailed regulations within clear but broad standards set by the legislature, and that it has the power to amend these regulations on a continuing basis as experience dictates. This also means that the agency has adjudicatory powers, so that it settles disputes in the first instance. This approach seeks to combine the best of both worlds; comprehensive allocation of water resources is made by experts according to a plan that is continually updated, and every action of the agency, whether regulatory or adjudicatory, is appealable to a court. The court reviews the agency action in terms of the statutory standards set out in the enabling legislation and in terms of general legal concepts of due process and equal protection. Structurally, the regulatory agency is more immune from political

pressure than appointed and elected officials of the executive branch. But whether the agency members themselves function on the basis of technological considerations depends on the willingness of the legislature to screen out political appointees during the confirmation process and the willingness of the members themselves to keep political considerations in a proper balance with other considerations.

The power to set up independent regulatory agencies exists. There is a large body of law dealing with them, and sophisticated criteria have been developed so that the agency is able to exist with the powers it needs to accomplish its purposes, while those who are regulated have avenues of appeal open to insure that the agency acts strictly within its legal powers. These agencies have been used both in allocating new scarce resources not encompassed by an established body of law (e.g., the FCC for airwaves and state utility commissions for private utility operation) and in allocating newly scarce resources which have already had developed a considerable body of law (e.g., the NLRB for scarce specialized labor skills, and the Iowa Water Permit System[17] for water resources).

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[17] Iowa Code §455A (1965). This scheme vests the power to grant all water rights in a single administrative agency that holds hearings on permit applications and grants water rights on the basis of beneficial use. The permits are granted for ten-year periods, subject to renewal, rather than perpetually, and use is not limited geographically. Protected minimum stream flows are also established by the agency. For a comprehensive description and analysis of the Iowa system, see Hines, A Decade of Experience Under the Iowa Permit System-Part One, 7 Nat. Resources J. 499 (1967); Part Two, 8 Nat. Resources J. 23 (1968). Included is an analysis of the constitutional questions involved when vested rights are completely changed due to a complete change in the legal system. The success of the Iowa system must be measured against the fact that there has been no drought in Iowa (a condition which prompted the passage of the Act) since its establishment to test its effectiveness.

The exact form that a statutory solution to water rights problems takes depends primarily on the political considerations operative in the particular state. Certainly the power exists--traditional constitutional doctrines as modified by increasingly sanctioned involvement of government in a wider spectrum of affairs militate against such state level approaches as the Iowa System being upset by constitutional challenges, even though such a system completely overthrows existing doctrines. And the doctrines enunciated in Arizona v. California[18] would seem to establish the power of the Federal Government to control water resources in a substantial watershed if those resources are being permitted to deteriorate without effective local, state, or regional action. Achieving an environmentally and socially effective solution thus becomes an exercise in political realities--to what extent can the Federal Government realistically hope to exert control if the control states and regions are realistically able to exert is not enough? State and local government is caught on the horns of a dilemma--powerful political forces, for various reasons, are highly resistant to the change of a long-established legal system. At the same time, resistance to changing that system invites equally unacceptable, from a local political standpoint, external control from the Federal Government. The Federal Government has power both to nudge the state toward an effective solution or to completely abrogate the role of the state.

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[18] 373 U.S. 546 (1963), discussed supra at note 6b and accompanying text.

MARYLAND COMMON LAW

Maryland law has followed a pattern similar to that of Virginia: it has an extensive body of common law developed by judicial decision and a growing body of statutory law expanding and modifying the traditional common law doctrines. Maryland law distinguishes among surface (diffused) waters, watercourses, navigable waters, and subsurface waters.[19]

Maryland applies to diffused surface waters what it terms the civil law rule.[20] This rule gives a natural right to the drainage of diffused surface water from the higher land to the lower;[20a] the lower owner cannot fight the water off his land by backing it up on the higher land, and the upper owner cannot materially change the nature of the flow from the higher to the lower by changing the place of entry or by concentrating the flow.[20b] But the upper owner is entitled to a right of reasonable use. He may make reasonable improvements to his property; if such improvements cause damage to the lower property because of the change they make in the flow of surface water, the lower owner cannot enjoin such improvements or force the upper

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19 This section is based to a great extent on the discussion contained in P. Glabreath, Maryland Water Law (1965) and in 15 Maryland Digest, Waters and Water Courses (1963 and 1969 Cum. Ann. Ser.).

20 E.g., Philadelphia, W. & B. Ry. v. Davis, 68 Md. 281 (1888). For brevity, parallel citations of these Maryland cases to the Atlantic Reporter will not be made.

20a Biberman v. Funkhauser, 190 Md. 424 (1948).

20b Battisto v. Perkins, 214 Md. 542 (1956); Comm'rs of Baltimore County v. Hunter, 207 Md. 171 (1955). A landowner may fill up his lot to repel drainage unlawfully thrown on his property. City Dairy Co. v. Scott, 129 Md. 548 (1917).

owner to stop the damage; but he can collect damages.[21] This approach is grounded on the philosophy of permitting the greatest development of land. The Maryland rule also permits the upper owner to collect diffused surface water so long as it is used to benefit his land and is not collected for the sole purpose of depriving the lower owner the use of the water; the lower ownes does not have any property rights in the water until it enters his land.

The first comprehensive definition of watercourse rights in Maryland in accordance with the doctrine of riparianism was made by the highest Maryland court in 1874.[22] In the following year,[23] the court made explicit that the natural flow doctrine[24] did not apply in Maryland, but rather the reasonable use doctrine:

> [A riparian owner] has the right to insist that the stream...shall continue to flow through his land in its usual quantity at the natural place and at its usual height... . Of course, we are not to be understood as meaning there can be no dimunition or increase of the flow whatever, for that would be to deny any valuable use of it. There may be, and there

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[21] Sainato v. Potter, 222 Md. 263 (1960); Kennedy-Chamberlin Development Co. v. Snure, 212 Md. 369 (1957).

[22] Gladfelter v. Walker, 40 Md. 1 (1874).

[23] Mayor and City Council of Baltimore v. Appold, 42 Md. 442 (1875).

[24] As discussed above, the natural flow theory, also rejected in Virginia, holds that a riparian owner cannot impair the quality or quantity of the flow in a stream in any material way.

> must be, allowed to all of that which is common, a reasonable use, and such a use, although it may, to some extent, diminish the quantity, or affect, in a measure, the flow of the stream, is perfectly consistent with the common right.[25]

The dispute in this case was over the right of the City of Baltimore to increase the flow of a small run through the plaintiff's property by 10,000,000 gallons per day in order to supply water to the inhabitants of Baltimore; an injunction was granted preventing this increased flow.

In this same case, the court established that there are no set rules by which to decide every dispute, but that each case was to be decided, as in Virginia, in light of the particular circumstances:

> The limits which separate the lawful from the unlawful use of a stream may be difficult to define. It is, in fact, impossible to lay down a rule to cover all cases, and the question must be determined in each case, taking into consideration the size of the stream, the velocity of the current, the nature of the banks, the character of the soil, and a variety of other facts. It is entirely a question of degree, the true test being whether the

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[25] 42 Md. at 456-7.

use is of such a character as to affect materially the equal beneficial use of the stream by others.[26]

As with Virginia case law, it is necessary to look at the particular disputes that have been decided in order to get an understanding of the scope of the law in Maryland. It has been decided[27] that an upper riparian owner can use a stream for watering his cattle, even though this causes pollution and consequent injury to the lower owner (who was in the business of drawing from the stream for a municipal water supply). The upper owner's use was held to be reasonable, and it is a property right of his to make that use; the right cannot be taken away from him, even for the acknowledged public purpose of municipal water supply, unless he is compensated. A later case[28] held that a reasonable use of a non-navigable stream included damming it up to provide water for an enterprise carried out on the riparian land. It was further held that it was immaterial whether the lower owner polluted the stream as to downstream owners; if the upper owner polluted the stream, the lower owner had a right to seek an injunction to prevent it. The concept that unreasonable pollution through the dumping of industrial waste of sewage is a violation of the rights of downstream riparian owners has been consistently upheld.[28a] And it has been further held that if two or more persons

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26 Id. at 456.

27 Helfrich v. Catonsville Water Co., 74 Md. 269 (1891).

28 West Arlington Improvement Co. v. Mount Hope Retreat, 97 Md. 191 (1903).

28a E.g., Livezey v. Town of Bel Air, 174 Md. 568 (1938).

pollute a stream by their concurrent action, causing injury to another through whose land the stream flows, they are jointly and severally liable for such wrong, so that the injured person may institute suit and recover damages against any one or all of the persons contributing to the injury.[28b] As in Virginia, if an operator of a mill pollutes the water to the injury of a lower owner, he is liable even though he is operating his mill in the usual manner and with reasonable care.[28c] In 1926, Maryland strictly applied the doctrine that water cannot be used on non-riparian land.[29] In view of the fact that it has been more than 40 years since this case has been decided, and because metropolitan areas of Maryland are in fact

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28b Jessup & Moore Paper Co. v. Zeitler, 180 Md. 395 (1942). Likewise, an injunction may be properly granted against pollution by one business, although the plaintiff does not proceed against other similar businesses who are also polluting the same stream. Woodyear v. Schaefer, 57 Md. 1 (1881).

28c Gladfelter v. Walker, 40 Md. 1 (1874). The inconsistency of this case with Helfrich v. Catonsville Water Co., supra note 9 and accompanying text, may be explained by an ancient judicial preference for protecting domestic uses over industrial uses. In Helfrich an owner was permitted to pollute as a result of his domestic use to the injury of an industrial (municipal) user; in Gladfelter, an owner was not permitted to pollute as a result of his industrial use to the injury of a domestic user. The strength of this preference is shown by the decision in Caretti v. Broring Bldg. Co., 150 Md. 198 (1926), in which a developer (hence, private business) was enjoined from permitting private homeowners in his development to pollute a stream by discharging into a sewer system that he had installed, because the domestic water supply of a lower owner was harmed thereby.

29 Kelly v. Nagle, 150 Md. 125 (1926). In this case, a riparian owner was permitted to cut off a small diversion of water to adjacent, non-riparian land for domestic purposes, even though the non-riparian owner had received the right to this water by a conveyance from the previous owner of the riparian land.

now procuring their water supply by transporting water out of other watersheds, it would appear that this doctrine will not find strict application in future cases.[29a] Under Maryland law, riparian rights may be lost by prescription,[30] by condemnation,[31] through voluntary agreements,[32] with the sale of riparian land,[33] by receipt of damages

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29a This conclusion is reinforced by the decision in Baltimore v. Day, 89 Md. 551 (1899). In that case, a riparian owner had conveyed to the city his water rights for the purpose of water supply for the inhabitants. The court gave a liberal construction of the conveyance, holding that the city could sell the water for use for domestic and manufacturing purposes outside of the city.

30 The water rights of a riparian owner may be taken by another if he does it in an open manner, hostile to the rights of the owner, that is, not by permission, license, or contract, and continually for a period of 20 years. A prescriptive right to pollute the waters of a stream can be acquired by one riparian owner against another. In Kranz v. Baltimore, 64 Md. 491 (1886), the city had polluted a stream which ran through Kranz's property; he did not bring an action until after the 20-year prescriptive period had passed, and, consequently, he lost his case. But a prescriptive right to pollute cannot be acquired against the state; if the pollution constitutes a public nuisance, a riparian owner has no right to continue it because he has done it in the past.

31 Condemnation is the process by which the government takes property, with compensation, under the powers of eminent domain for necessary public purposes.

32 It must be remembered that, under Kranz v. Nagle, supra note 29, the agreement is only valid as to the parties to it; other riparian owners and later purchasers from one of the parties who may be injured by the agreement are not bound to it.

33 This is no more than a recognition of the prevailing doctrine that, in the absence of language to the contrary, it is presumed that a conveyance of riparian land includes the water rights.

in place of injunctive relief,[34] through estoppel,[35] and under the equitable doctrine of laches.[36]

Prior to an act of the Maryland Legislature in 1862,[37] the state had the power to grant title to the beds of navigable waters, subject to the public right of fishing and navigation. The act in 1862 provided that from that time forward, no patent to land could be issued for land covered by navigable waters, although patents prior to 1862 would continue to be recognized. This act was interpreted to mean that the prohibition extended to all lands covered by water at high tide.[38] The effect of the act is that title to the beds of all navigable waters in Maryland is vested in the State, unless granted into private ownership prior to 1862. Another

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[34] Quite commonly, a court will give damages to an injured riparian owner rather than enjoin an invasion of his water right if the wrongful use is for a public purpose or if an injunction would cause undue hardship. See, e.g., note 21, supra, and accompanying text. In addition, when a riparian owner brings an action against a municipality for polluting a stream, the court will normally delay granting an injunction to give the municipality a reasonable opportunity to clear up the pollution or to acquire the rights of downstream owners by eminent domain. To grant immediate injunctive relief would work a great hardship on the inhabitants of the municipality. Livezey v. Bel Air, supra note 28a.

[35] A riparian owner may be legally precluded from asserting his water right if, by his conduct, he induces another to materially rely on an inference that the owner has no such right.

[36] Laches applies when a riparian owner actively fails to assert his right for no good reason over a substantial length of time.

[37] Md. Code Ann., Art. 54 §48.

[38] Day v. Day, 22 Md. 530 (1865).

Maryland statute[39] gives the right to accretion to riparian owners. Another statute[40] grants to riparian owners along navigable waters the exclusive right to make improvements so long as they do not interfere with navigation. This provision has been held to mean that the right to make these improvements is a vested property right which cannot be taken without compensation.[41] Another older statute[42] gives riparian owners the exclusive right to remove sand, gravel, or other material from the bed of adjacent water; invasion of this right has been held to be restrainable by injunction.[43] This statute applies to the beds of navigable waters; this is not completely in harmony with the concept that title to the beds of navigable waters is vested in the state, but the anomaly probably exists because the right to remove sand and gravel dates from 1788, while the act preventing the State from granting beds into private ownership dates only from 1862. Like Virginia riparian owners, riparian owners in Maryland along navigable waters have the right to access to the water, so long as navigation is not interfered with; but, unlike Virginia owners, owners along navigable waters in Maryland own only to the high water mark rather than the low water mark.

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39 Md. Code Ann., Art. 54, §45. Enactment of this provision served to confirm the law doctrine on this point as set out in Giraud's Lessee v. Hughes, 1 G. & J. 249 (Md. 1829).

40 Md. Code Ann., Art. 54, §48.

41 Mayor and City Council of Baltimore v. Canton Co., 186 Md. 618 (1946).

42 Md. Code Ann., Art. 27 §485.

43 King v. North Chesapeake Beach Land Improvement Co., 143 Md. 693 (1923).

Although there has been very little water found in Maryland flowing in underground streams, it is treated, if so found, in the same way as surface waters flowing in watercourses.[44] As to percolating waters, Maryland has rejected the absolute ownership doctrine that allows the landowner to do whatever he wishes with percolating waters under his lands, even to the extent of maliciously injuring another landowner.[45] Although there have been no specific cases in point decided in Maryland, dictum[46] indicates that Maryland will follow the California doctrine[47] that treats percolating water as a right in common among all overlying landowners, each being entitled to a reasonable use of his share of available water. It would be a consistent development of this doctrine to extend it to permit any surplus above the present needs of overlying landowners to be transported for use on other lands. This would permit the maximum development of water resources by rejecting the doctrine developed in other jurisdictions that restricts use of percolating waters to the overlying land, especially if such use would injure adjacent land.[48]

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[44] Western Md. Ry. v. Martin, 110 Md 554 (1909). As in Virginia, water is presumed to be percolating, unless it can be ascertained to be an underground stream from surface indications. Finley v. Teeter Stone, Inc. (Md. 1968).

[45] This doctrine was best stated in the English case of Acton v. Blundell, 152 Eng. Rep. 1223 (Ex. 1843).

[46] Western Md. Co. v. Martin, supra note 26.

[47] Katz v. Walkinshaw, 141 Cal. 116 (1903).

[48] For a discussion of cases setting out this doctrine, see P. Galbreath, supra note 19, at 36-38.

MARYLAND STATUTORY LAW

Article 25 of the Maryland Code[49] provides for Public Drainage Associations, Public Watershed Associations, and Shore Erosion Control Districts. Public Drainage Associations are authorized[50] for the purpose of draining wet, swampy, or overflowed land or lands subject to overflow. They are established by petition to the appropriate Board of County Commissioners, followed by approval after notice and hearing. The Associations carry out their duties by constructing and improving ditches, drains, and watercourses; these improvements are financed by taxing benefited landowners. These Associations also have the power to borrow money and the power of eminent domain.

Public Watershed Associations[51] are authorized for the purpose of carrying out works of improvement for flood prevention and

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[49] For brevity, all statutory citations are to the 1957 Maryland Code Annotated. Article 25 (County Commissioners) is cited to the 1966 Replacement Vol. and 1968 Cumulative Supp.; Article 27 (Crimes and Punishments) is cited to the 1967 Replacement Vol.; Article 43 (Health) is cited to the 1965 Replacement Vol. and 1968 Cumulative Supp.; Article 66C (Natural Resources) is cited to the 1967 Replacement Vol. and 1968 Cumulative Supp.; and Article 96A (Water Resources) is cited to the 1964 Replacement Vol. and 1968 Cumulative Supp.

[50] Article 25, §52-122.

[51] Id., §§169-218.

the conservation, development, utilization, and disposal of water in watershed and sub-watershed areas. This purpose is wider in scope than that of Drainage Associations and was intended to permit localities to take advantage of the provisions of the Federal Watershed Protection and Flood Prevention Act.[52] Public Watershed Associations are established in the same way as Public Drainage Associations, and they have the same powers to tax and borrow money and the power of eminent domain. Shore Erosion and Control Districts[53] are authorized to be set up among business or residential landowners bordering on any waters of the State for the purpose of protecting their property from shore erosion. A district is established by the filing of a petition by the landowners with the appropriate County Commissioners. The Department of Chesapeake Bay Affairs[54] recommends approval or disapproval of the petition based on feasibility and need. The County Commissioners are authorized to finance necessary construction and to collect all costs from the benefited landowners. The Commissioners have the discretion to pay for not more than 25 percent from County funds, and to accept funds to cover any portion of the remaining 75 percent from the State or Federal Government.

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52 P.L. 566, 16 U.S.C. §§1001-1007 (1964). This Act makes Federal technical and financial assistance available locally for planning and carrying our multi-purpose development of water resources in small watershed areas. Purposes include flood prevention, drainage and irrigation, recreation, fish and wildlife, and municipal and industrial water supply.

53 Article 25, §§167A-167E.

54 Discussed infra under Article 66C. See note 63 and accompanying text.

Article 43 of the Maryland Code contains provisions relating to Health. Broad powers are given the State Board of Health[55] to control the waters of the State from the standpoint of public health. The Board assists counties and municipalities in planning sewage systems and has the power to dictate the operations of sewage plants if they pose a threat to the public health. If such a sewage plant continues to be dangerous despite orders from the Board, and the cause is incompetent supervision or inefficient operation, the Board is empowered to step in and take over the operation of the plant.[56] The Board can also order a county or municipality to install a sewage system if it deems it necessary.[57]

Article 43 contains the provisions establishing Maryland as a member of the Potomac River Basin Compact.[58] Under other provisions, municipalities are given the right of eminent domain for the purpose of establishing water supply and sewage systems;[59] municipalities are empowered to set up water and sewer authorities,[60] and

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55 Art. 43, §§387-427.

56 Id. §392.

57 Id. §393.

58 Id. §407, discussed infra at note 124 and accompanying text.

59 Id. §410.

60 Under §§445-466, municipalities may establish water and sewer authorities by ordinance or resolution of the governing body. Such authorities can be established by two or more municipalities. The authority is run by a board composed of members of the governing body or citizens of the municipality. The board has the power to fix "reasonable and uniform" rates reviewable by the circuit court; the authority can issue bonds payable solely from its revenues, the bonds not capable of being a pledge of credit of the state or any political subdivision; and the authority cannot compete with existing utilities. The authority can force an abutting landowner to connect to its services unless he has another method in operation approved under State Board of Health standards.

counties are empowered to set up sanitary districts.[60a] A Science Advisory Board is provided for conducting investigations into and making recommendations concerning water pollution.[61] The Board is appointed by the governor from personnel from institutions of higher learning, industry, and government agencies.

Article 66C of the Maryland Code covers Natural Resources. A Board of Natural Resources is created[62] to "establish a State agency which shall review and evaluate all natural resource policies, programs, and practices of State, county, regional, and Federal agencies and institutions" and to "unify and coordinate policies, plans, programs and practices which will insure the preservation, development, wise use, and enjoyment of all the natural resources for the

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60a Under §§645-673, a county governing body can, by ordinance or resolution, declare an intent to create a sanitary district, operated for the same purposes as water and sewer authorities for municipalities described in note 71 supra. The ordinance appoints a Commission whose members cannot be county office holders. If the Commission finds it to be a necessity for the public health, safety, and welfare of the residents, and it is feasible from the standpoints of engineering and finance, a district can then be created with the approval of the county governing body. Twenty-five property owners can petition for the establishment of a district, and ten property owners can appeal the decisions of the Commission to the county governing body. The Commission is required to make surveys and plans; 25 or more property owners who so petition must be provided a hearing on these plans. The Commission establishes user charges and can issue bonds to provide facilities. Since these bonds are issued on the full faith and credit of the district and the county governing body, a tax can be levied by the governing body if district revenues are not sufficient to meet debt obligations. The district must provide services to all landowners, and all landowners must connect to the services. The district has the power of eminent domain.

61 Id. §§718-724.

62 Art. 66C, §§1-5.

greatest benefit to the State and its citizens."

The Department of Chesapeake Bay Affairs is established[63] for "the planning, development, management, and conservation of the Chesapeake Bay and all other tidal waters and the shore line and bottoms thereof." The Commission, which is the executive body of the Department, consists of five members appointed by the Governor based on geographic criteria. It has the power to promulgate rules and regulations "deemed necessary and proper for governing or restricting the taking or catching of fish [and] shellfish..., prohibiting or restricting devices used for taking...[fish or shellfish] and establishing seasons." The Commission negotiates "under existing law with other states for agreements on the catching of crabs, the size of fish, and opening and closing of seasons." It grants permits to remove sand, gravel, etc., from public lands under navigable waters of the Bay "if deemed in the best interest of the State." The Department is given general responsibility for shore erosion control activities, including developing a program of public education, reviewing petitions for the formation of shore erosion control districts, providing technical assistance, designing shore erosion control structures, and supervising their erection.

Further provisions of Article 66C establish the Maryland Geological Survey, empowered to investigate and recommend plans and

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[63] Id. §§6-13L.

policies for the protection of waterfront property of the State;[64] establish the Natural Resources Institute as a department of the University of Maryland for the purpose of research and education in the area of natural resources;[65] and empower the Board of Natural Resources to grant permits to remove rare earths and minerals from the navigable waters of Chesapeake Bay, giving preference to the discoverer.[66] Soil Conservation Districts are authorized for the purpose of encouraging landowners to establish soil and water conservation practices on their property.[67] These districts are established by petition to the State Soil Conservation Committee followed by a hearing before the committee, and then a referendum among the affected landowners. If approved, the district is empowered to construct needed engineering structures, charging the costs to those who are benefited. The District also has the power to adopt land use regulations, with powers of enforcement.

Under Article 66C, the riparian owner has first choice for duck blinds along his shoreline;[68] and a riparian owner along the tidal waters or tributaries of Chesapeake Bay has the first choice of fish net positions.[69]

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64 Id. §§15-17.

65 Id. §§18-21.

66 Id. §§22-30.

67 Id. §§88-103.

68 Id. §154.

69 Id. §253.

Under Article 66C, Maryland is a member of the Atlantic States Marine Fisheries Commission, a compact among the states from Maine to Florida established for the purpose of recommending better utilization of fisheries.[70] Another compact, adopted in 1958 between Maryland and Virginia, regulates the general subject of shellfish, with enforcement carried out by the appropriate state law enforcement officers.[71]

Article 96A of the Maryland Code covers Water Resources. A Department of Water Resources is established to supervise and plan the multiple purpose development of the waters of the State for the best interests of the people.[72] A Water Resources Commission, made up of five members appointed by the Governor, makes surveys and investigations relating to water resources of the State, and adopts necessary regulations. Waters of the State are defined as including all surface and underground waters. It is made unlawful to appropriate surface and underground water without a permit from the Department of Water Resources, unless the water is for domestic or farming purposes; for an approved municipal water supply; or for a use, not thereafter abandoned, in use before 1 January 1934.[73] The Department controls dams and waterway obstructions, including both construction and maintenance; dams under a certain size are exempted. The criteria

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70 Id. §256.

71 Id. §261A.

72 Art. 96A, §1-9.

73 Id. §10-22, Appropriation of Waters; Reservoirs and Dams.

followed by the Department in granting permits for water appropriation and waterway obstruction are the greatest practicable utilization of the waters of the State; the preservation of the public safety; the promotion of the general welfare; and the avoidance of uses that would be inadequate, wasteful, dangerous, or detrimental to the public interest. The applicant for a permit must be provided a hearing, with notice to the public, to present its views. The Department of Water Resources is also given broad powers over pollution abatement.[74] Pollution is defined as including any discharge of that which creates a nuisance or renders unclean or noxious the waters of the State, and any discharge that is detrimental to aquatic life or to use of waters for present or future sources of public water supply or for commercial, industrial, agricultural, recreational, or other reasonable uses. This definition includes thermal pollution. The department is empowered to recommend methods for and to encourage pollution abatement, to review state projects and activities as to pollutants, to establish water quality standards, and to order the cessation of any pollution it deems excessive. It is made a misdemeanor to violate an order to cease pollution. The Department of Water Resources is also given power to regulate the use of underground waters. No well can be drilled without a permit.[74a]

[74a] Id. §§30-49, Wells.

Article 96A also adopts the Susquehanna River Basin Compact.[75] This compact, which includes New York, Maryland, Pennsylvania, and the Federal Government, is established for the purpose of flood damage reduction, conservation, development of surface and ground water supply, development of recreational facilities, propagation of wildlife, power development, improvement of navigation, and pollution abatement. The major activity of the Commission set up under the compact is to develop a comprehensive plan covering the areas of interest, and to encourage the members of the compact to enact legislation that will further the goals of the plan. Hearings are provided for prior to adoption of portions of the plan, and the Commission is authorized to enforce its provisions if the members fail to do so.

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[75] Id. §§59-74.

VIRGINIA COMMON LAW

Virginia law generally follows riparian doctrine, placing heavy emphasis on reasonable use.[76] A distinction is made among surface waters, subsurface waters, watercourses, and navigable waters.

Surface waters are defined as waters of a casual and vagrant character, flowing in no channel and coming from rain and snow or incident to boggy land.[77] Virginia follows the common law view[78] that surface water is a natural and common enemy; the owner may fight it as he chooses. He may obstruct or hinder its flow and may turn it upon the land of his neighbor, even if it has never flowed there before. This view is tempered by a reasonable use limitation that his right to fight off surface water must not be exercised with a purpose to interfere with his neighbor's land beyond what is necessary. For instance, if an owner constructs a building on his own land in the usual and customary manner, he is not liable for the retention or diversion of diffused surface water.[78a] But if he collects surface water into an artificial channel so as to divert it to his neighbor's land in an unnatural quantity at a certain point, he has overreached his rights.

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76 See, 20 Michie's Jurisprudence, Waters and Watercourses (1952 and 1968 supp.) (hereinafter cited as 20 M.J., Waters)

77 20 M.J., Waters §4.

78 Under the other view, the civil law, neither an upper owner nor a lower can do anything to stop surface water. Id. at 21.

78a Harris Motor Co. v. Pulaski Furniture Co., 151 Va. 125 (1928). For brevity, parallel citations of these Virginia cases to the South Eastern Reporter will not be made.

Percolating waters are defined as those which do not exist in a known and well-defined channel.[79] All subsurface waters are presumed to be percolating waters until it is shown that they exist in a well-defined channel. Since waters can only be subject to riparian rights when they flow in well-defined channels (whether surface or subsurface) percolating waters belong to the owner of the soil where they appear. In the absence of malice or negligence,[79a] the owner may use them as he wishes, for instance in well digging and mining, even if subsurface waters are diverted thereby from the lands of his neighbor.[79b]

The term "watercourses" denotes bodies of water having continuous flow in one direction.[80] Riparian law limits use from watercourses to riparian tracts;[80a] and to the watershed of the stream, even though a riparian tract may extend beyond the watershed.[80b]

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[79] 20 M.J., Waters §§8-9.

[79a] Under the old common law, the owner of the land owned absolutely the percolating water on his land and could make any use of it that he wanted, even maliciously cutting off the supply to his neighbor or wasting it. But most American jurisdictions, including Virginia, have adopted a standard of reasonable use, so that malicious use, waste, or use on non-riparian land are not allowed. See, e.g., Clinchfield Coal Corp. v. Compton, 148 Va. 437 (1927).

[79b] Couch v. Clinchfield Coal Corp., 148 Va. 455 (1927).

[80] 20 M.J., Waters §§10-20.

[80a] A municipality cannot buy a small tract of land on a stream several miles from its corporate limits and thereby become entitled to use water from the stream to supply its inhabitants. Gordonsville v. Zinn, 129 Va. 542 (1921).

[80b] If a riparian tract is broken up into smaller tracts, only those tracts which are still riparian will retain water rights, even if the fragments are reacquired.

The riparian right passes with the title to riparian land and is considered to be a property right rather than a license or a privilege. Hence, a riparian right cannot be taken for a public use without making just compensation to the owner.[80c] Because this right is incident to land ownership, the existence of the right does not depend on the exercise of it. Neither does this right depend on the uses made of the property nor the purposes for which the land is held; hence, the fact that it is public land is immaterial.[81] The absolute doctrine of natural flow is not followed in Virginia; instead, the courts define the prevailing view as reasonable use. Under this doctrine, the reasonable exercise of a riparian's right depends on the exercise

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80c Rankin v. Harrisonburg, 104 Va. 524 (1905).

81 Chesapeake & Ohio R. R. v. Walker, 100 Va. 69 (1902). It is interesting to note that water rights are defined in terms of flow.

not being inconsistent with the rights of other riparian owners.[82] What is "reasonable" depends on the particular circumstances of the case.[83] Since the Virginia court has not enunciated any set standards as to what is reasonable, and since the issue of reasonableness is a question of fact to be determined by the jury, it is necessary

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82 In most of the Virginia cases on this point, the court quotes two passages from two renowned treatises as the starting point of its reasoning:

> The well-settled general rule on this point is that each riparian proprietor has ex jure naturae an equal right to the reasonable use of water running in a natural course through or by his land for every useful purpose to which it can be applied, whether domestic, agricultural, or manufacturing, provided it continues to run, after such use, as it is wont to do, without material dimunition or alteration and without pollution; but he cannot diminish its quantity materially or exhaust it (except perhaps for domestic purposes and in the watering of cattle) to the prejudice of the lower proprietors, unless he has acquired a right to do so by grant, prescription, or license.

R. Minor, Real Property, §55, at 76 (2d ed. 1928).

> The general rule is that each riparian proprietor is entitled to the steady flow of the stream according to its natural course. But to apply this rule strictly would be to preclude the best use of flowing waters in most cases; and where power is desired, the rule must yield to the necessity of gathering the water into reservoirs. It is lawful to do this when it is done in good faith, for a useful purpose, and with as little interference with the rights of other proprietors as is reasonably practicable under the circumstances.

T. Cooley, Torts 693-4 (2d ed. 1888).

83 > The reasonableness of the use depends upon the nature and size of the stream, the business or purposes to which it is made subservient, and on the every-varying circumstances of each particular case. Each case must, therefore, stand upon its own facts and can be a guide in other cases only as it may illustrate the application of general principles.

Davis v. Harrisonburg, 116 Va. 864, 869 (1914).

to look to the various cases that have been decided in order to get a feel for the kind of judgments that are made. For instance, a stream cannot be depleted except for domestic purposes or for watering cattle.[84] An upper riparian owner cannot deplete a stream so as to injure a lower riparian owner if they both use the stream for stock and agriculture.[85] It is unreasonable to detain water in reservoirs for future use in a dry season or to obtain a greater supply than the stream affords by its natural flow in ordinary circumstances.[86] But if an upper owner uses no more than the normal flow to operate his water wheels, then it is not unreasonable for him to interrupt the flow during the dry season, to a lower owner's water wheels in order to build up a sufficient head to operate his wheels without interruption.[87] Diversion of the flow of water without damage to the lower owner does not warrant recovery.[88] Hence, it has been held that it is permissible to divert water from riparian land to a use outside of the watershed if lower owners are procuring their domestic supply from other sources on their own land.[89]

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84 Hite v. Luray, 175 Va. 218 (1940).

85 Carpenter v. Gold, 88 Va. 551 (1892).

86 Davis v. Harrisonburg, supra note 15.

87 Id. See also Mumpower v. Bristol, 90 Va. 151 (1893), which decided a similar dispute on the basis that the upper owner built his mill first. This holding is close to the doctrine of appropriation.

88 Virginia Hot Spring Co. v. Hoover, 143 Va. 460 (1925).

89 Id. This holding contravenes the prevailing doctrine; it shows the willingness of the court to modify the law if the circumstances reveal a public benefit (here, increased tourism) without injury (here the lower owners had access to, and in fact depended on, other sources of water).

An exception to riparian law has been made under the Water Power Act,[90] so that an appropriation theory is used. This reflects a legislative policy of encouraging the development of water power. The doctrine of reasonable use finds its greatest application in litigation over obstructions; it is generally held that an owner cannot obstruct a stream so as to cause flood damage to the property of another. His obstruction must be so designed as to preclude flooding under all conditions which can be reasonably anticipated; he is excused only is there has been an "act of God."[91] Pollution is presently covered by statutory law in Virginia, discussed below. The common law recognized pollution of non-navigable waters as an offense against the public; it was not a wrong for which a private individual could recover private damages unless he could show that he had suffered an injury different from what was suffered by the public. And the offense of pollution was enforced strictly enough in one case that a mine owner was enjoined from polluting with mine waste to the detriment of lower riparian owners, even though the pollution was the

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90 Va. Code Ann. §§62.1-80 to 62.1-103 (1968 Replacement Volume). This act was intended to encourage the greatest development of water power by granting water rights according to an appropriative scheme rather than a riparian scheme. This act is discussed below in the section on Virginia statutory law.

91 An act of God, as the term is known to the law, is such an unusual and extraordinary manifestation of the forces of nature that it could not under normal conditions have been anticipated or expected.
20 M.J., Waters §16 at 46. The duty of the obstructor to modify his obstruction as conditions change is a continuing one. Id. §5 at 24.

necessary consequence of the only method in which he could operate his mine.[92] Further, even though it was recognized that water becomes polluted as a normal consequence of flowing through a populated area, nevertheless, if a riparian owner pollutes with human waste to such an extent as to have a material effect greater than the normal cumulative effect of flowing through a populated area, then this owner is liable.[93] Since, as discussed below, the title to the beds of navigable waters is vested in the state, and the traditional law has looked on those waters as the method provided by nature for draining away waste, then it is a matter of public convenience to permit pollution of navigable waters, even to the detriment of fishing rights. The only common-law restriction is that the pollution not be a nuisance.[94]

The final category under Virginia common law is navigable waters.[95] As the common law of Virginia first developed, two classifications of waters were recognized, navigable tidal waters and non-navigable waters. The ownership of the beds of non-navigable waters

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92 Arminius Chemical Co. v. Landrum, 113 Va. 7 (1912).

93 Trevett v. Prison Ass'n, 98 Va. 332 (1900).

94 20 M.J., Waters §24.

95 20 M.J., Waters §§21-28.

is vested in the riparian owners, who own to the middle of the watercourses.[96] The ownership of the beds of navigable tidal waters is vested in the state, with the riparian owners owning to the low water mark.[97] These doctrines for a long time failed to include navigable non-tidal waters; this resulted in a confusing course of court decisions that was finally resolved in favor of the generally followed American rule that title to the beds of all navigable waters is vested in the State.[98] The reason for the anomaly was a perhaps too rigid following of English common law which recognized only tidal, navigable waters, because there are few, if any, non-tidal, navigable waters in England. The reason that the Virginia courts finally came

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96 Id. §11. At common law, this ownership of the bed gave to the owner, to the extent of his land, the exclusive right of fishing; no one else, without his consent, had the right to fish in that non-navigable water. But the riparian owner did not have the right to obstruct the passage of fish, up or down the stream, since the natural run of fish is one of the advantages of a stream. Crenshaw v. State River Co., 27 Va. 271 (1828).

97 The test of whether a stream is navigable is whether it is being used, or susceptible of being used, in its natural condition, as a highway for the customary modes of trade. United States v. Appalachian Electric Power Co., 311 U.S. 377 (1940). Once a waterway has been judicially found to be navigable, it remains so. Id. If a stream is flotable or navigable in fact on a reasonably predictable basis, it is judicially navigable. Hot Springs Lumber and Mfg. Co. v. Revercomb, 106 Va. 176 (1909). And if a stream has been used for commerce only at occasional times when conditions are favorable, it is not navigable. Ewell v. Lambert, 177 Va. 222 (1941). The common-law rule has always been that ownership of riparian land on tidal water extends only to the highwater mark, 20 M.J., Waters §22, but this has been changed by statutes in Virginia. Va. Code Ann. §62.1-2 (1968).

98 James River and Kanawha River Co. v. Old Dominion Iron and Steel Corp., 138 Va. 461 (1924); see A. Embry, Waters of the State, 151, 159-160 (1931).

down on the side of the generally accepted rule is the practical need for ownership of the beds to vest in the state in those cases where a generally exercised public right, navigation, was likely to be subject to invasion. Since the basis for federal powers over waters is the Commerce Clause, this is an additional reason for a state to want to step in and regulate.

VIRGINIA STATUTORY LAW

The Virginia Constitution contains two provisions affecting water rights:

a. §63 (15), which prohibits the General Assembly from enacting "any local, special or private law...declaring streams navigable, or authorizing the construction of booms or dams therein, or the removal of obstructions therefrom." This provision preserves the question of navigability as one for the courts to be submitted to the jury.

b. §185, which specifies that the State shall not "become a party to or become interested in any work of internal improvement, except public roads and public parks, or engage in carrying on any such work." This provision, added in 1869, has been interpreted to include channels of trade and commerce, but not governmental functions (e.g., parks, public buildings).[99] It was added because, in the early years of the Commonwealth, the government had loaned a great deal of public funds to private corporations developing canals, turnpikes, and railroads in anticipation of substantial benefit to the people; as a result, heavy losses were incurred by the Commonwealth when many of these corporations failed.

Section 1-10 of the Virginia Code[100] provides that:

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99 Harrison v. Day, 200 Va. 764 (1959); Almond v. Day, 199 Va. 1 (1957); Almond v. Day, 197 Va. 782 (1956); Shenandoah Lime Co. v. Governor of Va., 115 Va. 865 (1914).

100 1966 Replacement Volume.

> The common law of England, insofar as it is not repugnant to the principles of the Bill of Rights and the Constitution of this State, shall continue in full force within the same, and be the rule of decision except as altered by the General Assembly.

This means that water rights in Virginia are determined in accordance with the common law, as developed in the decisions of the Virginia courts discussed above, except as the General Assembly has specifically changed it by statute.

The statutes of Virginia affect water rights primarily under two titles: Title 21, which concerns conservation and sanitary districts; and Title 62, which deals with waters, ports, and harbors.[101]

Chapter 1 of Title 21[102] permits the establishment of soil and water conservation districts as "public bodies corporate and politic"[103] for the broad purposes of providing for the conservation of soil and soil resources and to prevent erosion and floodwater damage. Established under referenda, the districts have the power to promulgate binding regulations, subject to the approval of the Virginia State Water Conservation Commission, to meet their objectives.

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101 For brevity, all statutory citations, unless otherwise noted, are to Virginia Code Annotated. Title 21 (Drainage, Soil Conservation, Sanitation, and Public Facilities Districts) is cited to the 1950 Code (1950 Replacement Vol. and 1968 Cumulative Supp.); Title 62 (Waters of the State, Ports and Harbors) is cited to the 1950 Code (1968 Replacement Vol.).

102 §§21-1 to 21-112.21.

103 §21-53.

They have the power of eminent domain, and they fulfill their aims through surveys and investigations, the construction of engineering structures, and by development and implementation of land use plans.

Chapter 2 of Title 21[104] permits the establishment of Sanitary Districts for the purposes of construction, maintenance, and operation or water supply, sewerage, garbage, heat, light, fire fighting, power, and gas facilities. They function in the same broad manner as the soil and conservation districts and have the power to require entities within their jurisdiction to connect to their various services.[105]

Chapter 3[106] permits the establishment of Sanitation Districts covering tidal waters for the purposes of relieving tidal waters of pollution, to generally improve the public health, and to specifically improve oyster beds. Chapter 4[107] operates similarly in the area of non-tidal waters for the purpose of relieving pollution. These districts are established by a circuit or corporation court with the approval of the State Health Commission.

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104 §§21-113 to 21-140.2

105 Forced connection is constitutional under the police powers of the State; it is not a taking of property but a regulation of its use. Weber City Sanitation Comm'n v. Craft, 196 Va. 1140 (1955).

106 §§21-141 to 21-223, Sanitation Districts Law of 1938 - Tidal Waters.

107 §§21-224 to 21-290, Sanitation Districts Law of 1946 - Non-tidal Waters.

Under Chapter 12[108] any person desiring to drain his lands through the lands of others may apply to the circuit court or corporation court which may grant the leave requested under prescribed conditions.

Title 62 covers waters, ports, and harbors. It establishes that the ungranted bays, rivers, creeks, and shores of the sea are to continue as the property of Virginia with a general public right to use as a common for fishing and fowling.[109] This has been interpreted to apply to both tidal and non-tidal waters.[110] Under this title, a riparian owner has no common law right to remove substances, such as sand and gravel, from the beds of these waters.[111] And, since the title to these beds is in the State, the Federal Government cannot exercise any sort of property interest in the beds through its powers over navigation.[112] Because of the interest of the public in the right of navigation, a patent for land in Virginia constituting a part of the bed of a navigable river conveys no title to it.[113]

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108 §§21-428 to 21-432.

109 §62.1-1.

110 Schermerhorn v. Dozier, 251 F. 839 (4th Cir. 1918).

111 United States v. Smoot Sand and Gravel Corp., 248 F.2d 822 (4th Cir. 1957).

112 Norfolk Dredging Co. v. Radcliff Materials, Inc.,264 F.Supp. 399 (E.D.Va. 1967).

113 Norfolk City v. Cooke, 68 Va. 430 (1876). This decision has been incorporated into the Code. See §62.1-1, discussed at note 109 supra and accompanying text.

Under Title 62, the rights of riparian owners are established to extend to the low water mark;[114] this is a modification of the common law, which extends such property rights only to the high water mark.[115] It has been held that the water rights under this title may be conveyed separately from the riparian lands which give rise to those rights.[116]

The general purpose of Title 62 is to regulate, under the police powers of the State,[117] the use of waters for beneficial purposes.[118] The State policy is established as reasonable use, without waste. Under this Title, the rights of the state to improve navigation is expressly preserved.[119]

Chapter 3 of Title 62 is the State Water Control Law.[120] Its purpose is (1) to "maintain all State waters in, or restore them to, such condition of quality that any such waters will permit all

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114 §62.1-2.

115 Thurston v. Portsmouth, 205 Va. 909 (1965).

116 Id.

117 The concept of police power is a judicially developed doctrine which permits government interference with private rights in those cases where the public health and welfare is critically involved, but the government does not have specific regulatory power under its Constitution. It is a strong enough concept to permit government regulation even in derogation of constitutional rights, e.g., the Contract Clause of the U. S. Constitution. Home Building and Loan Ass'n v. Blaisdell, 290 U.S. 398 (1934). This concept formed a substantial part of the basis for the increased regulation of economic affairs exercised by state governments as a means of dealing with the crisis of the Depression.

118 §62.1-11.

119 §62.1-7.

120 §62.1-14 to 62.1-44.1.

reasonable public uses, and will support the propagation and growth of all aquatic life..., (2) safeguard the clean waters of the State from pollution, (3) prevent any increase in pollution, and (4) reduce existing pollution."[121] This Chapter empowers the State Water Control Board to establish and enforce quality standards for water in relation to reasonable use, to issue certificates of discharge to any person discharging pollutants into State waters, and, in general, to administer and enforce the State Water Control Law. Discharges regulated include sewage, industrial wastes, and other wastes.[122] These discharges are covered regardless of the length of time that they have been occurring; this precludes pollution by prescription.[123]

Chapter 5 establishes the Potomac River Basin Commission in conjunction with Maryland, West Virginia, Pennsylvania, and the District of Columbia.[124] This Commission is established for the general purposes of promoting uniform laws and regulations to abate and control pollution of the waters concerned, including investigating the basis and making recommendations for quality standards.

Chapter 6 establishes the Ohio Valley Water Sanitation Commission in conjunction with Illinois, Indiana, Kentucky, New York,

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121 §62.1-14.

122 Under §62.1-15 (9), other wastes are basically defined so as to include any possible pollutant except industrial waste and sewage.

123 §62.1-16.

124 §§62.1-64 to 62.1-69.

Ohio, Pennsylvania, Tennessee, and West Virginia.[125] The Commission is set up for the general purpose of controlling future pollution and abating existing pollution.[126] Unlike the Potomac River Basin Commission, the Ohio Valley Commission has positive enforcement powers, rather than merely powers to investigate and recommend. Under Article VI of the Compact,[127] sewage and industrial wastes are to be treated in accordance with certain minimum standards set out in the Compact, and in accordance with higher standards if set by the Commission after "investigation, due notice, and hearing." Article IX gives the Commission power to issue binding orders to any municipality, corporation, person, or other entity to effect its standards; jurisdiction for enforcement of these orders lies with both the Federal courts in the compacting states and their State courts of general jurisdiction.

Chapter 7 concerns Water Power Development and Conservation of Hydroelectric Power Dams and Works.[128] This law, the Water Power Act, was originally passed in 1928 for the purpose of encouraging water power development for hydroelectric energy generation. Under this chapter, all dams to be used for hydroelectric energy for public service must be constructed under license of the State Corporation Commission; the Commission grants a license to an applicant if his use

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125 §§62.1-70 to 62.1-79.

126 §62.1-71.

127 Id.

128 §§62.1-80 to 62.1-103.

would be the greatest practical utilization of the waters and if he is financially sound and able to carry out his proposed use.[128a] A dam licensed under this act cannot unreasonably obstruct navigation and stream flow. Public service corporations engaged in the development of water power for hydroelectric energy who are licensees are given the power of eminent domain.

Chapter 8,[129] Impoundment of Surface Waters, gives a land owner the power to impound diffused surface waters as long as he does not thereby damage others; the impounded waters become his property. Also under this Chapter, a land owner may apply to a circuit court or corporation court for permission to capture flood waters on his own land.[130]

Chapter 9, the Mill Act,[131] permits authorization by the courts of general jurisdiction for the building of dams under the

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128a These criteria have been interpreted to express a legislative policy of preventing competition, speculation, and inadequate development. Garden Club v. Va. Pub. Serv. Co., 153 Va. 659 (1930).

129 §§62.1-104 to 62.1-115.

130 Floodwaters are defined, under §62.1-104(9), as "waters in a stream...over and above the average flow." The standards to be applied by the court in granting permission are that there will be no damage to other owners; no decrease in the average flow of the stream; and, if the impounded flood waters are to be used for irrigation, use of no more flood water than necessary and such use only in the watershed of the stream. The Chapter requires that a copy of the application be provided to the Commissioner of Water Resources and the State Water Control Board. The Commissioner makes recommendations to the court concerning effects on flow, on proposed or likely watershed development, and on pollution abatement. If the State Water Control Board advises that pollution abatement will be affected, the court cannot approve the application.

131 §§62.1-116 to 62.1-127.

broad standards that the house, garden, or yard of another are not flooded; navigation and passage of fish are not impeded; or crossings or existing dams are not obstructed.

Chapter 11[132] authorizes localities to enter into agreements with the Federal Government for carrying out development projects for the purposes of improvement of rivers and harbors and flood control; the localities are given power to condemn land for these projects.

Chapter 13[133] gives similar powers to cities to cooperate with the Federal Government for projects to improve the navigability of streams.

Chapter 16[134] confirms the common law right of the riparian owner to erect a wharf as long as it does not obstruct navigation or injure other private rights.

Chapter 19[135] prohibits the dredging of sand and gravel from the beds of streams in the State unless it is done by or with the permission of the riparian owner or in conjunction with a navigational improvement being carried out subject to the authority of the Federal Government.

Chapter 20[136] covers miscellaneous offenses. It is made a misdemeanor to cast garbage, refuse, etc., into the waters of the

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132 §§62.1-148 to 62.1-152.

133 §§62.1-155 to 62.1-158.

134 §§62.1-164 to 62.1-165.

135 §§62.1-190 to 62.1-193.

136 §§62.1-194 to 62.1-196, Miscellaneous Offenses.

State; or to discharge oil from vessels except in an emergency.

Other Titles affecting water law less broadly are Titles 10, 15, and 28. Title 15 establishes the powers of municipalities to acquire water supply.[136a]

Title 28[137] defines oystering rights of riparians. With minor exceptions, exclusive right to use a creek, cove, or inlet for sowing and planting oysters or other shellfish is granted to the owner or other lawful occupant of land, provided such waters are within the limits of the property boundaries.[138] Holders of oyster grounds rented from the State may erect oystering facilities provided there is no obstruction of navigation or injury of private rights.[139] A land owner who is not a lessee, or a riparian holder, may secure enough of the oyster grounds held by another to permit the erecting of a bulkhead or wharf or the opening of a channel to reach navigable depth.[140] And any county, city, town, or the Department of Highways has the right by eminent domain to acquire any right or interest to any oyster grounds necessary for their purposes; the

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136a Under §§15.1-37 and 15.1-37.1, a city, county, or town can construct a dam across the bed of any navigable river, stream, or tributary in the state for the purpose of providing sources of public water supply for internal agricultural, residential, governmental, and industrial development. The dam must have permission of the Army Chief of Engineers, the authorization of the State Attorney General, and the approval of the Governor.

137 Fish, Oyster, Shellfish, and Other Marine Rights.

138 §28.1-116.

139 §28.1-117

140 §28.1-118.

Department of Conservation and Economic Development has the same powers when the purpose of the condemnation is for a navigational improvement.[141]

Under Title 10, the Commissioner of Water Resources, under the Director of Conservation and Economic Development, promotes the development and utilization of water power and other state resources, including the encouragement of investment in industrial enterprises. The only statutory provision affecting water wells comes under this Title.[142] Under it, the owner of an abandoned or unused flowing artesian well must cap it to prevent waste. It is a misdemeanor not to so cap it, and the Director of Conservation and Economic Development can enter the land and cap such a well at the owner's expense.

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141 §28.1-115.

142 §10-117.1